I. Connecticut generates about 3.6 million tons of all MSW materials. DEEP's consultant, SERA, has projected that by 2024, Connecticut will generate either 3.91 million tons or 3.48 million tons of MSW. The 3.91 million tons is based on the long-term trend in Connecticut; the 3.48 million tons is based on EPA predictions of national trends (CMMS, p. 24).

There are 5 waste to energy facilities available in Connecticut for the disposal of MSW. Assuming 85% of permitted design capacity, the 5 WTE facilities have a total capacity of 2,035,556 TPY (2,394,513 TPY permitted capacity) (CMMS, p. 24). DEEP is considering proposals to develop a new facility to replace the WTE facility in Hartford. We assume a new facility will continue to provide the same capacity that is presently available or that MIRA will renovate the present facility and continue with the current capacity (about 700,000 TPY). A small amount (about 300,000 TPY) of MSW is disposed out of state.

The statewide MSW diversion rate is approximately 35%. (CMMS p. 32) A survey of diversion rates shows that Connecticut's diversion rate exceeds the vast majority of other states' recycling rates. In other words, Connecticut is doing an excellent job diverting waste. Of course, there is room for improvement.

The waste management industry in Connecticut is substantial. The industry employs directly about 6,000 people; 10,000 people are employed in the waste management industry and related industries; has a direct economic impact of $1.8 billion; and a cumulative impact of $3.4 billion.
We believe that Connecticut should re-visit the 60% diversion goal. Previously, the diversion goal was 58%. The 2010 Connecticut Program Review and Investigations Committee report at p. 6 determined that the then 58% target was driven by a projected shortfall capacity of 1.5 million tons in 2024.\(^1\) Although the DEEP projections were wrong, DEEP recommended to the 2014 legislature that the target be increased to 60%. Before the 60% goal was set, the DEEP and the legislature did not consider light weighting, the substantial reduction in paper, design changes, the Connecticut economy, the stagnant Connecticut population and their impact on a future recycling target. Neither the 2014 legislature nor DEEP relied on new projections. The State should focus on the mandated recyclables and potentially recoverable recyclables (and organics) in the disposed MSW and create a new metric that focuses on the disposed mandated recyclables. Periodically, the State should determine the specific materials in the disposed mandated recyclables, the markets for those materials, why those materials are disposed, and how more of those materials can be diverted. Then, the State should set a goal for the diversion of those disposed mandated recyclables. A similar analysis of the potentially recoverable materials also should be made.

In the 2015 Waste Characterization Study performed by DEEP's consultants, the consultants determined that 15.2% of residential MSW and 20.2% of commercial MSW are mandated recyclables. (See attached Exhibits 1, 2, and 3) In other words, about 80% of mandated recyclables are recovered, assuming the universe of mandated recyclables consists of the disposed and recovered mandated recyclables. The Task Force heard from Recycle British

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\(^1\) In the 2006 Solid Waste Plan, P. J-7, DEEP projected that for fiscal year 2011 Connecticut would generate 4.186 million tons; for fiscal year 2013 Connecticut would generate 4.328 million tons; for fiscal year 2014 Connecticut would generate 4.402 million tons, and for fiscal year 2024 Connecticut would generate 5.233 million tons. The projections were wrong: for fiscal year 2011 Connecticut actually generated 3.128 million tons; for fiscal year 2013 Connecticut actually generated 3.117 million tons; and for fiscal year 2014 Connecticut actually generated 3.320 million tons.
Columbia that its recovery rate is 78%.² We acknowledge that glass, a mandated recyclable, is included in Connecticut's recycling rate but not all of it is "recovered".

As part of its focus on the disposed mandated recyclables, the Task Force should review and evaluate the following:

1. Connecticut's statutory scheme designed to divert solid waste from disposal;
2. Connecticut's infrastructure for the collection of mandated recyclables;
3. Connecticut's infrastructure for the processing of mandated recyclables; and
4. the markets that are available for the mandated recyclables.

II. (a) Connecticut's Statutes

Connecticut and its municipalities have strong legislation and ordinances designed to divert materials from disposal. (See attached Exhibit 4) For example:

a. Connecticut requires residents and businesses to separate mandated recyclable materials into separate containers from trash to facilitate recycling;

b. Connecticut requires solid waste haulers to offer curbside collection of mandated recyclables, if they offer curbside collection of trash;

c. Connecticut requires certain generators of organics to source separate organics;

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² Mr. Laydon stated during his August 30, 2017 presentation before the Task Force that the British Columbia recovery rate increased from 55% to 78%; that the increase was mainly due to the expansion of the mandated recyclables list and the development of curbside collection in new areas; he also stated that glass is separately collected.
d. DEEP requires permitted facilities to randomly inspect loads for excessive contamination;

e. Connecticut has substantial penalties for violations of its waste management statutes; and

f. Connecticut has designated certain MSW as recyclables. (See attached Exhibit 5)

(b) Connecticut's Collection Infrastructure

A convenient, widespread, and cost effective collection system is crucial to the diversion of MSW. A review of Connecticut's collection infrastructure shows that the State has such a system. (See Exhibit 6) There are hundreds of haulers in Connecticut; several towns and cities collect recyclables with their own resources; several towns and cities have contract collection, and approximately 100 towns and cities have drop off facilities for residential recyclables which transfer the recyclables to Connecticut processing facilities.

Recent municipal awards of collection contracts to private haulers and a survey of subscription services in Connecticut prove that the cost per household and cost per ton for the collection of recyclables is very low. For example, the annual cost per household for every other week collection of recyclables in Manchester, South Windsor, West Hartford and Wethersfield, is less than $40.00 (not including rebates). The Task Force learned that Recycle British Columbia's cost to collect, process, and market recyclables is $432.00 CN per tonne. A average cost per ton for similar services in the four towns is approximately $100 per ton (not including rebates).
(c) **Connecticut’s Processing Infrastructure**

The CMMS states at p. 18 that Connecticut has sufficient capacity at its MRFs to process all the mandated recyclables generated in Connecticut. We agree. The MRFs are conveniently located and have a capacity in excess of 4,000 TPD. (See attached Exhibits 7 and 8)

The MRFs have a contamination rate that averages less than 10% annually.\(^3\) The contamination is the result of the glass and other contaminants in the recyclables, and not because of inefficient sorting equipment. The MRFs supply high quality materials to the markets. The markets, rarely if ever, reject the materials supplied by Connecticut’s MRFs. (See attached Exhibit 9)

(d) **Markets for Connecticut’s Mandated Recyclables**

The CMMS, at p. 17, states:

> While there are well founded concerns regarding global demand, pricing and quality requirements for recyclables demand is expected to remain sufficient to absorb Connecticut’s supply of most grades of paper, metals, and plastics for the foreseeable future. Since Connecticut is not positioned to influence global markets for those materials, boosting end-use demand is a lower priority than strengthening collection and processing systems.

We agree with the CMMS’s assessment of the market.

As previously stated, Connecticut’s MRFs have contamination rates that average below 10% annually. Those rates show that the MRFs are efficient and innovative. Everyone agrees that some contamination is inevitable.

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\(^3\) Mr. Laydon told the Task Force on August 30, 2017 that the British Columbia contamination rate for single stream recyclables is almost 12%. He also stated that glass is separately collected.
As previously stated, the owners and operators of Connecticut's MRFs rarely, if ever, see markets reject their materials. Rand-Whitney, a Connecticut business that annually receives approximately 85,000 tons of OCC from Connecticut's MRFs, welcomes the high quality of material that the MRFs supply to it.

III. The Disposed Mandated Recyclables

Connecticut should not be married to a universal recycling rate, especially one that does not consider light weighting, design changes, Connecticut's declining population, and Connecticut's depressed and evolving economy. While goals have benefits, they should not be blindly applied because they can lead to unnecessary and unrealistic programs and mandates, like reducing the generation of MSW by 10% and increasing the recycling rate to 45%. Instead, the State should determine periodically (perhaps every 3 years) what disposed materials have markets that Connecticut can practically and economically supply.

The 2015 Waste Characterization Study determined that 17.2% of the residential and commercial disposed MSW is mandated recyclables; 15.2% of the residential disposed MSW is mandated recyclables; and 20.2% of the commercial MSW is mandated recyclables. The waste study analyzed MSW on the tip floor; therefore, the three rates do not tell the entire story. The 5 WTE sites recover materials before and after burning and the Waste Management ash landfill recovers materials before the ash is actually landfilled. Based on information from the 5 facilities and the ash landfill, we believe that about 3 to 4% more mandated recyclables are recovered.
Next to organics, the mandated recyclables offer the best opportunity for Connecticut to divert more MSW materials. To that end, we have studied the gaps, if any, in Connecticut's statutes, collection infrastructure, processing infrastructure, and markets.

The gap in the statutes is ineffective enforcement by local and state officials (multi-families, brokers, apartments). Connecticut and the municipalities have adequate laws and ordinances. The problem is lack of enforcement, especially by Hartford, New Haven, Waterbury and Bridgeport. Those cities make insufficient and/or ineffective efforts to recover mandated materials. (See Exhibit 10) We understand that Connecticut's largest cities have extraordinary problems, such as high unemployment, weak economies, many residents who live below the national poverty rate, and very low home ownership. The cities still are in the best position to identify generators that violate laws and ordinances. The four underperforming cities have municipal collection; therefore, they are uniquely situated to police the MSW generators. If those four underperforming cities focused more on recycling like Stamford, Connecticut's recycling rate would increase substantially. We believe, therefore, that a universal, one size fits all approach to increase recycling for 169 towns and cities is unnecessary. Frankly, the vast majority of the 169 towns and cities are doing an impressive job diverting materials.

We believe that there are no gaps in the present infrastructure designed to collect mandated recyclables. Curbside collection of mandated recyclables is universal (except in a handful of small towns), offered by many haulers, and a "good buy", considering the services.

We believe Connecticut's processing infrastructure is sufficient to handle all the mandated recyclables generated today and in the future. The residue rates and the markets'
satisfaction with the materials show the MRFs are equipped with efficient and effective sorting systems. Connecticut's MRFs clearly produce high quality materials for the available markets.

Glass is a significant problem that must be addressed. Glass, a mandated recyclable, cannot be practicably and economically processed by Connecticut's MRFs. Glass contaminates loads and damages the sorting equipment. The legislature and all stakeholders must work together to fix this problem.

IV. **Recommendations:**

We propose the following recommendations so that Connecticut can increase diversion:

1. **Set realistic goals** - The State should revisit the 60% diversion rate. In doing so, the State should choose a diversion goal that is realistic, practical, and economical. The State should evaluate the impact of advancements in light-weighting and the significant impacts that design innovations have had on the generation of packaging materials.

2. **Enforce existing laws, rules and regulations** - The recycling rate will increase if the State and underperforming towns and cities focus on enforcement of existing laws and the diversion of mandated recyclables.

3. **Enforce existing laws, rules and regulations** - Local authorities that are poor recycling performers must effectively, uniformly and aggressively enforce the relevant statutes and ordinances, specifically existing recycling mandates and disposal bans. Large municipalities must do more to enforce the applicable statutes and ordinances against owners of multifamily homes and apartment buildings.
4. **Enforce exist laws, rules and regulations** - Local authorities that are poor recycling performers must effectively enforce the relevant statutes and ordinances against commercial and institutional generators of MSW.

5. **Educate** - Local authorities must designate recycling co-ordinators to aid in educational efforts and tracking of recycling.

6. **Educate** - To ensure uniformity across the State, the State should continue with the "What's In, What's Out" program.

7. **Understand the solid waste management infrastructure** - The State should determine what gaps, if any, exist in Connecticut's waste management statutes, collection infrastructure, and processing infrastructure that focus on the management of mandated recyclables.

8. **Require proper planning** - Commercial and institutional generators of MSW must provide to local authorities recycling management plans showing that they have in place appropriate collection for MSW and mandated recyclables.

9. **Provide an incentive** - Local and state authorities should provide tax incentives and tax exemptions for recycling equipment to encourage private investment. This will assist operators to upgrade equipment and systems, as necessary to meet market demands.

10. **Help municipalities** - Local authorities should increase registration/permit fees to support recycling efforts. Local authorities should use the registration fees solely to support their recycling efforts and programs.

11. **Fix Recycling** - Glass cannot be processed by Connecticut's existing MRF infrastructure. The bottle bill should be amended to include wine and liquor bottles and to no longer include plastic and metal containers.
12. **Fix Recycling** - The escheats from the "bottle bill" should be used solely to further recycling enforcement and education efforts.